[OPTION]
AIEB1 Digital I/O / Multi-Out Expansion Board.
The AIEB1 adds six assignable outputs as well as both optical and coaxial digital In/Out.

A5000

A4000

Filter Type List

LowPass1	Low-pass filter #1. (A low-pass filter blocks out all frequencies above the cutoff frequency.)
LowPass2	Low-pass filter #2. Offers much higher Q (resonance) than low-pass filter #1.
LowPass3	The characteristics of this low-pass filter are somewhere between LowPass1 and LowPass2.
HiPass1	High-pass filter #1. (A high-pass filter blocks out all frequencies below the cutoff frequency.)
HiPass2	High-pass filter #2. Offers much higher Q (resonance) than high-pass filter #1.
BandPass	Band-pass filter. (Allows only frequencies near the cutoff frequency to pass; blocks out all higher and lower frequencies.)
BandElim	Band-elimination filter. (Blocks out the frequency range around the cutoff frequency, while allowing higher and lower frequencies to pass.)
Peak1	A filter with an emphasis peak at the cutoff frequency.
Peak2	With this filter the original sound is mixed with the sound of the Peak1 filter.
2Peaks	A combination of two peaking filters.
2Dips	A combination of two band elimination filters.
DualLPFs	A combination of two low-pass filters.
LPF+Peak	A combination of a low-pass filter and a peaking filter.
DualHPFs	A combination of two high-pass filters.
HPF+Peak	A combination of a high-pass filter and a peaking filter.
LPF+HPF	A combination of a low-pass filter and a high-pass filter.

Effect Type List

Scratch (DIGITAL SCRATCH)	**Sympho** (SYMPHONIC)
AutoSyn (AUTO SYNTH)	**Detune** (ENSEMBLE DETUNE)
TechMod (TECH MODULATION)	**Flanger** (FLANGER)
NoisDly (NOISY MOD DELAY)	**V-Flang** (V-FLANGER)
NoisAmb (NOISE AMBIENT)	**Phaser1** (PHASER1)
Jump (JUMP)	**Phaser2** (PHASER2)
BeatChg (BEAT CHANGE)	**Tremolo** (TREMOLO)
Pitch1 (PITCH CHANGE 1)	**FlngPan** (FLANGING PAN)
Pitch2 (PITCH CHANGE 2)	**FlowPan** (FLOW PAN)
LoReso (LOW RESOLUTION)	**Rotary** (ROTARY SPEAKER)
Noisy (NOISY)	**Rot2Way** (2WAY ROTARY SPEAKER)
AtkLoFi (ATTACK LOFI)	**2Rotors** (DUAL ROTORY SPEAKER)
Radio (RADIO)	**DS+Rot** (DIST + ROTARY SPEAKER)
TurnTbl (DIGITAL TURNTABLE)	**OD+Rot** (OVERDRIVE + ROTARY SPEAKER)
LoFi (LO-FI)	**Amp+Rot** (AMP SIM + ROTARY SPEAKER)
LPFiltr (LOW PASS FILTER)	**DS+2Way** (DIST + 2WAY ROTARY SPEAKER)
HPFiltr (HIGH PASS FILTER)	**OD+2Way** (OVERDRIVE + 2WAY ROTARY SPEAKER)
BPFiltr (BAND PASS FILTER)	**Amp+2Wy** (AMP SIM + 2WAY ROTARY SPEAKER)
AWah+DS (AUTO WAH + DIST)	**AutoPan** (AUTO PAN)
AWah+OD (AUTO WAH + OVERDRIVE)	**Dly+Pan** (DELAY + AUTO PAN)
TWah+DS (TOUCH WAH + DIST)	**3Delay** (DELAY L, C, R)
TWah+OD (TOUCH WAH + OVERDRIVE)	**2Delay** (DELAY L, R)
W+DS+DL (WAH + DIST + DELAY)	**Echo** (ECHO)
W+OD+DL (WAH + OVERDRIVE + DELAY)	**X-Delay** (CROSS DELAY)
TalkMod (TALKING MODULATOR)	**CtlDly** (CONTROL DELAY(MONO))
3BandEQ (3BAND EQ)	**CtlDlyS** (CONTROL DELAY(STEREO))
Isolatr (ISOLATOR)	**Ambienc** (AMBIENCE)
Enhance (HARMONIC ENHANCER)	**Karaoke** (KARAOKE)
VceCncl (VOICE CANCEL)	**Eref** (EARLY REFLECTION)
Comp (COMPRESSOR)	**GateRev** (GATE REVERB)
Comp+DS (COMP + DIST)	**RvsGate** (REVERSE GATE)
C+DS+DL (COMP + DIST + DELAY)	**Hall** (HALL)
C+OD+DL (COMP + OVERDRIVE + DELAY)	**Room** (ROOM)
Clip1 (CLIPPER1)	**Stage** (STAGE)
Clip2 (CLIPPER2)	**Plate** (PLATE)
NoiseGt (NOISE GATE)	**WhiteRm** (WHITE ROOM)
V-Dist (V-DISTORTION)	**Tunnel** (TUNNEL)
Dist (DISTORTION)	**Basemnt** (BASEMENT)
OverDrv (OVERDRIVE)	**Canyon** (CANYON)
AmpSim (AMP SIMULATOR)	**T-Dly** (TEMPO DELAY (MONO))
DistS (STEREO DISTORTION)	**T-DlyS** (TEMPO DELAY (STEREO))
OvrDrvS (STEREO OVERDRIVE)	**T-XDly** (TEMPO CROSS DELAY)
AmpSimS (STEREO AMP SIMULATOR)	**T-Flang** (TEMPO FLANGER)
Dist+DL (DIST + DELAY)	**T-Phase** (TEMPO PHASER)
OvDr+DL (OVERDRIVE + DELAY)	**T-AWah** (TEMPO AUTO WAH)
Chorus (CHORUS)	**T-Scrch** (TEMPO DIGITAL SCRATCH)
Chorus2 (CHORUS2)	**T-ASyn** (TEMPO AUTO SYNTH)
Celeste (CELESTE)	**T-FgPan** (TEMPO FLANGING PAN)

Specifications

Tone generation method	AWM2 tone generator	
Maximum polyphony	126 notes (64 notes on the A4000), 32 multitimbral parts (16 parts on the A4000)	
A/D conversion	20 bit 64-times oversampling	
D/A conversion	24 bit 8-times oversampling	
Digital I/O (only when AIEB1 I/O expansion board is installed)	Input/output	DIGITAL connectors S/P-DIF (coaxial) OPTICAL connectors S/P-DIF (optical)
	Input frequency	48 kHz, 44.1 kHz, 32 kHz
	Output frequency	44.1 kHz
Sampling frequency	Analog input	44.1, 22.05, 11.025 kHz, 5.5125 kHz (mono and stereo)
	Digital input (only when AIEB1 I/O expansion board is installed)	48 kHz, 44.1 kHz, 32 kHz external synchronized recording (stereo only) 1/2, 1/4 and 1/8 undersampling is supported
Internal sample memory capacity	Standard	4 MB (installed on-board)
	Maximum	128 MB (When four 32 MB 72-pin SIMM modules are installed. The on-board 4 MB are unused only if memory has been expanded to the maximum.)
Sampling time	Maximum sample length	32 MB monaural 64 MB stereo
	Maximum sampling time (mono or stereo)	6 minutes 20 seconds (44.1 kHz) 12 minutes 40 seconds (22.05 kHz) 25 minutes 21 seconds (11.025 kHz) 50 minutes 43 seconds (5.5125 kHz)
Effects	6 effect blocks (3 on the A4000), Total equalizer (4 bands), Sample equalizer	
Program	128 programs	
Sequencer	Realtime recording and playback	

Front panel	POWER switch, INPUT L,R jacks (phone x 2), REC VOLUME (L& R shared), MASTER VOLUME (L&R shared, STEREO OUT & PHONES shared), PHONES OUTPUT jack, Knobs (1 - 5), Mode buttons (PLAY, EDIT, REC, DISK, UTILITY), Function buttons (six buttons), Command/Exit button, Assignable button, Audition button, LCD (320 x 80 dot, LED backlight), LCD contrast control, 3.5" 2HD/2DD dual mode floppy disk drive	
Rear panel	STEREO OUT L/MONO, R (phone jack x 2), ASSIGNABLE OUT L, R (phone jack x 2), MIDI IN-A/B, OUT, THRU-A/B (IN, OUT, THRU on the A4000), SCSI (half-pitch, 50-pin), Expansion board slot, Power supply connector (AC inlet), Fan	
Dimensions	Two-space rackmount unit W 480 mm x D 461 mm x H 90 mm (18-7/8" x 18-1/8" x 3-9/16")	
Weight	8.0 kg (17lbs 10oz)	
Included items	Power cable x 1, CD-ROM x 10, DEMO disk x 4, Power cable for internal hard disk (long) x 1, Power cable for Zip® drive (short) x 1, SCSI cable for internal hard disk x 1, IDE cable for internal hard disk and Zip® drive x 1, Owner's manual x 1	
Options (made by Yamaha)	AIEB1: I/O expansion board	
Internal expansion devices (made by other manufacturers)	Expansion memory (use a pair of identical-size 72-pin SIMM modules of the following types)	Access time 70 ns or less Bit width x 32 (no parity) or x 36 bit (parity) Fast Page or EDO, JEDEC standard Capacity 4 MB/8 MB/16 MB/32 MB
	Internal hard disk drive (3.5 inch) performance requirements	Interface 50-pin SCSI or 40-pin IDE Power supply +5V maximum 840 mA +12V maximum 2400 mA
	Internal Zip® drive	Interface 40-pin IDE (ATAPI) Power supply +5V 0.8A

Specifications are subject to change without notice.
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For details please contact:

ISO9001
JQA-1868

YAMAHA
YAMAHA CORPORATION
P.O.BOX 1, Hamamatsu Japan

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YAMAHA

Professional Sampler

A5000
A4000

A New Breed of Sampler Is Born
The A5000/A4000—Samplers That Revolutionize Sampling

A New Breed of Sampler Is Born

The A5000/A4000—Samplers That Revolutionize Sampling

Ever since the introduction of sampling technology, virtually every rackmount sampler on the market has been just that—a sampler—and nothing more. Sure there have been advancements in sound quality and the addition of digital effects, but the basic concept has remained the same...UNTIL NOW. Announcing the arrival of the revolutionary A5000/A4000—professional samplers with the power not only to create sounds, but to shape them in a way never before dreamed possible.

Of course the A5000/A4000 have impressive specs for a sampling unit. Both models are expandable with up to **128 MB of RAM** and can accommodate an **Internal Hard Drive** and **Internal Zip® Drive** simultaneously. The **A4000** provides **16 Multitimbral Parts** and **64 Notes of Polyphony**, while the **A5000** gives you nearly double the power with **32 Multitimbral Parts** and **126 Notes of Polyphony**. And for ultimate flexibility and convenience, these samplers are compatible with a wide range of sample formats, including **AIFF** and **WAV** among others, and are bundled with special **Sample and Parameter Editing Software**.

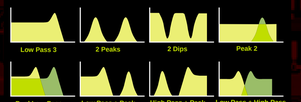
But the A5000/A4000 are not merely "samplers"—they are advanced synthesis tools that let you process samples creatively...and easily. Both models provide abundant features for versatile sound production: **16 Types of Ultra Fat Filters** that deliver powerful resonance, **96 Types of Effects** for creating never-before-heard sounds, a **MIDI Syncable LFO** with fully programmable waveforms, unprecedented **Loop Divide/Remix** and **Resampling** functions, **Direct-to-CD Burning** capability and much, much more! And with their **Large LCD Panel**, heavy-duty **Realtime Control Knobs** and **Intuitive User Interface**, these samplers are incredibly easy to operate, allowing you to give full concentration to creating your own unique sounds and music.

Powerful Filter Section

The A5000/A4000 feature an elaborate filter stage, providing 16 different filter types with complete control over the parameters. Many filter types feature a Q (resonance) setting that can be controlled by keyboard velocity—great for creating expressive acid leads and basses. Along with the standard low-pass, high-pass and band pass filters, these samplers feature many unusual filters such as band eliminate, peak, and dip filters. Also included are several unique multi-mode filters, which let you assign two independent filters to a single sample; a low-pass and high-pass filter for example.

Filter & EQ Edit screen

Filter type examples



96 Outstanding Onboard Effects

The A5000/A4000 are not just high-quality samplers, they're also highly advanced digital multi-effect processors, exceeding the capability of many professional stand-alone effect processors. The A5000 gives you 6 blocks of effects and the A4000 gives you 3. Each effect block can be assigned any one of the 96 onboard effect algorithms, which include a huge selection of reverbs, distortions, modulation effects and delays, as well as several truly unique effects such as Auto Synth, Tech Modulation, Digital Scratch and an extensively programmable Lo-Fi effect. Most effect types can be applied during the sampling process—combine this capability with the Resampling function and you'll have virtually endless effect processing power at your fingertips. You can even have the A5000/A4000 double as a high-end studio effects processor by assigning effects to the stereo analog inputs.

A5000 Effect Setup screen

A4000 Effect Setup screen

An Indispensable Tool for Dance Music Remixing & Production

If you're into sequencing or remixing dance tracks, you'll find the A5000/A4000 are a dream come true. Packed in these samplers is an extensive array of sample editing functions that are ideal for today's dance music.

■ Loop Divide/Remix

The Loop Remix function divides a sample loop into discrete sections according to preset patterns, and then randomly rearranges their timing and order, while adding reverse, pitch, lo-fi and gate effects in the process. The result is a totally unique, remixed loop. With this function you can instantly create awesome break-beat fills, hip-hop shuffles, and electro grooves...all at the touch of a button. Plus, the remixing process is non-destructive, which means you can freely make as many remixed loops as you want without affecting the original sample. Whenever you come up with a remixed loop that you like, you can store the randomly generated pattern that created it as a User Type for later use.
The Loop Divide function automatically slices a sample loop into several parts according to the beat, while simultaneously assigning each part to a different note. This allows you to compose your own remixes by playing the sample parts manually on a MIDI keyboard.

Loop Remix Edit screen

■ Resampling

Once you get your hands on the A5000/A4000's Resampling function you'll be amazed at how easy and convenient it is to match the pitch and tempo of your samples to the rest of your sequenced tracks. Pitch Convert mode lets you change the pitch of a sample without altering the speed. Time Stretch mode lets you change the speed of a sample without altering the pitch. Speed variations can be calculated based on tempo, length, beat or time, according to your preference. If you like to compose tracks by sampling rhythm loops from multiple sources, Resampling is a function you can't do without.

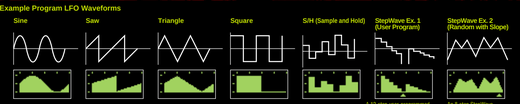
Time-Stretch Execute screen

■ MIDI Syncable LFO with Programmable Waveforms

Not only do the A5000/A4000 feature independent LFOs for each sample, but also a master Program LFO—a MIDI syncable LFO exclusively for samples assigned to the Program setup. By setting the cutoff modulation source of any sample to Program LFO, you can have the cutoff frequency sweep according to the rate and waveform of the LFO.
StepWave, one of the 6 Program LFO waveforms, expands your modulation capability by allowing you to set up to 16 "steps" within an LFO cycle to control the modulation effect. You can program the modulation level of each step yourself, or have the A5000/A4000 randomly generate the waveform for you. You can even smoothen the waveform by adding slopes between each of the steps.

StepWave Setup screen

Example Program LFO Waveforms



Intuitive User Interface

Navigating through the various functions is remarkably easy thanks to the A5000/A4000's intuitive user interface. Simply select a Mode and Function from the front panel matrix and the parameters associated with that function will be clearly displayed on the bright, easy-to-read 320 x 80 LCD panel. Five panel knobs allow you to open pop-up menus, select values and execute operations quickly and conveniently.

Realtime MIDI Control Knobs (Panel Play)

By selecting the Panel Play function, the A5000/A4000's four right panel knobs become realtime MIDI controllers, allowing you to tweak the sound of the internal samples as well as control external MIDI synthesizers. You can even record the MIDI control data transmitted by each knob into an external sequencer and have all the changes play back automatically.

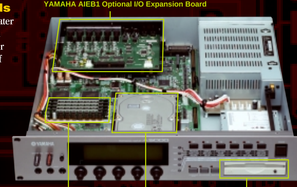
Consecutive Sampling Function

Have you ever wanted to borrow a friend's drum machine and sample all of its sounds? Or perhaps sample several tracks off of a sampling CD? With conventional samplers, recording multiple sounds in a row can be extremely time consuming since you must go through the sampling setup procedure each time you want to record a new sound.
With the A5000/A4000's Consecutive Sampling function, however, you can make as many samples as you want, one by one, without pressing any buttons between samples! Just set the Record Type to "New+" and press GO—the A5000/ A4000 will create a new sample every time an audio signal is detected and automatically pause once the signal stops. Samples will be mapped out automatically in the order that they were recorded, saving you even more time and effort.

Ready to Expand to Your Exact Needs

The A5000/A4000 provide impressive expansion capability to cater to your exact sampling needs. Both models are equipped with a SCSI interface, allowing you to connect an external hard drive or CD-ROM drive for quick and easy loading of sample data. And if portability is a concern, you can easily install an internal hard disk drive (50-pin SCSI or 40-pin IDE) or replace the floppy disk drive with a Zip® drive (ATAPI) using the provided connection cables. The onboard sampling memory can be expanded up to an incredible 128 megabytes using pairs of standard 72-pin SIMMs. And for professional-level music production, the optional AIEB1 I/O expansion board provides 6 individual audio outputs (in addition to the 4 audio outputs already on the unit) as well as both optical and coaxial digital I/O capability.
Zip® is a trademark of Iomega Corporation.

YAMAHA AIEB1 Optional I/O Expansion Board



This photo is for illustrative purposes only. Necessary wire connectors are not shown.

Direct-to-CD Burning Capability

The A5000/A4000 allow you to connect a CD-R or CD-RW drive directly to their SCSI port and back up the contents of your hard drive—without the need for a computer. Not only does this provide a cost-effective way to store your projects, but it also allows you to effortlessly produce your own audio sampling CDs.

Compatibility with a Broad Range of Sample Formats

The A5000/A4000 have the ability to import and export AIFF and WAV files directly to and from any DOS-formatted floppy disk, hard disk or Zip® disk, as well as import from CD-ROM. Plus they are compatible with sample files from other Yamaha samplers such as the highly acclaimed A3000 and SU700, as well as compatible with various sample formats used by other manufacturers, thus giving you the support of a vast library of sounds.

Supported Formats for Import

EX7/5/5R
Voices (from FD, HD, non-LPC RAM samples only)
Waves (from FD, HD, non-LPC RAM samples only)

SU700
Samples (from FD, HD)
Note: Except segmented data stored on multiple floppy disks.

TX16W
Samples (from FD)

WAV File
8/16-bit linear, mono/stereo, ".WAV" extension
(from DOS-format FD, HD, or ISO9660-format CD-ROM)

AIFF File
8/16-bit linear, mono/stereo, ".AIF" extension
(from DOS-format FD, HD, or ISO9660-format CD-ROM)

Standard MIDI File
Format 0, ".MID" extension
(from DOS-format FD, HD, or ISO9660-format CD-ROM)

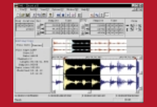
Sample Data of Other Manufacturers
The following data can be imported via floppy disk, hard disk or other storage medium: Akai S1000 or S5000 programs and samples; E-mu EIIIx presets and samples; and Roland S760 patches or samples (data may not load properly in some cases).
Note: The product and company names listed above are trademarks or registered trademarks of the respective manufacturers.

Sound Library and Software CD-ROMs Included

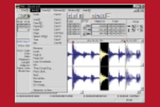
Bundled with the A5000/A4000 is a 9-set collection of CD-ROMs packed with samples ranging from hip-hop and break-beat rhythms to finely recorded orchestral instruments. Also included is a software CD-ROM that contains parameter-editing and sample-editing applications for both Mac and Windows.

TWE Wave Editor

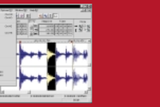
TWE is a comprehensive hard disk recording and editing package that lets you graphically edit and process sound files. You can import/export sound files directly to and from the A5000/A4000 via SCSI connection as well as record sound to hard disk from any audio source.
Note: A sound card with audio inputs is required for hard disk recording.



Waveforms are graphically displayed on your computer screen, allowing you to easily select and edit any part of a sound file.



A complete set of editing functions are provided, including cut and paste, normalize, time compression/expansion, pitch shift, reverse and EQ.



After editing a sound file, you can convert the sampling rate, change the bit size and save the data in AIFF or WAV format.

A5000/A4000 Editor

The A5000/A4000 Editor makes editing your samples incredibly easy by letting you visually change the parameters on your computer screen. All changes are sent to the A5000/A4000 via MIDI in realtime, so you'll be able to instantly hear the results of any edits you perform.

The Memory List Window lets you see at a glance all the programs, sample banks and sample files in your A5000/A4000. You can select any of these for editing by simply double-clicking on the listed name.

The Program Edit Window lets you quickly edit the parameters related to the A5000/A4000 Program setup, such as effects setup, MIDI channel assignment and Program LFO.

The Sample Edit Window displays all the parameters related to the sample banks and sample files in your A5000/A4000. Drag the sliders with your mouse or enter values directly with your keyboard. By clicking the on-screen keyboard, you can play back the sample as you are editing it.

TOOLS for the A5000/A4000

Windows95/98
- XGWorks lite V3.0
- A5000 Editor
- A4000 Editor
- YAMAHA Wave Editor TWE V2.2
- Acrobat Reader 4.0
- YAMAHA CBX Driver

Macintosh
- A5000 Editor
- A4000 Editor
- YAMAHA Wave Editor TWE V2.2
- Acrobat Reader 4.0
- QMS 2.5.6
- OMS Setup for YAMAHA devices

Audio Data (samples) 98 Tracks

Professional Studio Library — "Standards" CD-ROM

This CD-ROM contains a superb-sounding collection of acoustic and electrically amplified instruments. Included is a wide variety of grand pianos, organs, brass, strings, woodwinds, guitars, drums and more—all the essentials on one fantastic disc!

Professional Studio Library CD-ROM x 8

This professional 8-disc sound library features programs developed by some of the world's foremost music producers and sound designers. On these discs you'll find an enormous selection of sample programs, from a complete collection of musical instruments to a vast assortment of synthesizers and sample loops tailored to today's dance music scene. Specially designed for use in demanding audio production applications, these CD-ROMs boast sound quality that's nothing short of amazing.

The contents of "Real Drums," "World/Latin Instruments," and "DJ/Producer Tools Kit" are essentially the same as the "Hot Tracks," "World Beat," and "DJ/Producer Tools" CD-ROMs for the A3000, respectively, distributed by YAMAHA Music Soft Europe Ltd. The contents of "Syntrax/Loops" is essentially the same as the "Sin Trax" CD-ROM for the A3000 distributed by YAMAHA Europa GmbH.